

Appl. No. 10/628,935
Amdt. Dated December 12, 2005
Reply to Office Action of October 5, 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (currently amended) A carton comprising a plurality of side panels hingedly joined together by parallel fold lines, and end panels hingedly joined along a hinged edge thereof to respective the side panels ~~having respective end panels hingedly joined thereto~~ by a second fold line substantially perpendicular to the parallel fold lines, said end panels each having a free edge opposite said hinged edge, and a locking mechanism comprising two notches formed ~~in a~~ in said free edge of each panel of two opposed pairs of the end panels, each of the notches being positioned in the free edge an equal distance from one of the parallel fold lines closest to a respective one of the notches, such that when the side panels are folded to form the carton and the end panels are folded over, one of the notches from each of the end panels interlocks with one of the notches from an adjacent one of the end panels to form double-notch locking junctions, said end panels remaining substantially planar during and after folding of the end panels to interlock them together.

2. (original) The carton of claim 1, wherein the notches are substantially rectangular in shape and have tapered sides, such that a mouth of the notches in the free edge is wider than a base of the notches.

3. (original) The carton of claim 2, wherein each of the notches are the same size.

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4. (original) The carton of claim 3, wherein the number of side panels in the carton is selected from the group consisting of four, eight or sixteen side panels.

5. (previously amended) The carton of claim 4, wherein the notches are formed only in four of the end panels, such that each of the end panels having the notches opposes another of the end panels having the notches.

6. (previously amended) The carton of claim 5, further comprising a diagonal score line extending from an interior corner of each of the notches in one set of opposing said end panels to an outer corner formed by an intersection of one of the parallel fold lines closest to a respective one of said notches and the second fold line to facilitate interlocking of the notches.

7. (original) The carton of claim 6, wherein four double-notch locking junctions are formed when the end panels are folded and interlocked, and the carton comprises a central open area having corners formed by the four double-notch locking junctions.

8. (original) The carton of claim 6, wherein each of the notches has an outer width of 1.5 to 3 inches.

9. (currently amended) An end closure system for a carton having side panels hingedly joined together by parallel fold lines, and end panels hingedly joined to the side panels, the end panels each being substantially planar and having a free edge and a hinged edge foldably attached to the side panels, the system comprising two notches of equal size formed in the free

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5 edge of each of four opposing said end panels, each of the notches being spaced an equal distance
from a respective closest one of the parallel fold lines forming an adjacent one of the side panels
such that when the side panels are folded to form the carton and the end panels are folded over,
one of the notches from each of the end panels interlocks with one of the notches from an
adjacent one of the end panels to form four double-notch locking junctions, said end panels
10 remaining substantially planar during and after folding of the end panels to interlock them
together.

10. (original) The system of claim 9, wherein the notches are substantially
rectangular in shape and have tapered sides, such that a mouth of the notches in the free edge is
wider than a base of the notches.

11. (original) The system of claim 10, wherein the number of side panels in the
carton is selected from the group consisting of four, eight or sixteen side panels.

12. (previously amended) The system of claim 11, further comprising a diagonal
score line extending from an interior corner of each of the notches in one set of opposing said end
panels to an outer corner formed by an intersection of one of the parallel fold lines closest to a
respective one of said notches and the hinged edge to facilitate interlocking of the notches.

13. (original) The system of claim 12, wherein the carton comprises a central open
area having corners formed by the four double-notch locking junctions.

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14. (original) The system of claim 13, wherein each of the notches has an outer width of 1.5 to 3 inches.

15. (currently amended) A blank foldable into a carton having side panels hingedly joined together by parallel fold lines, and end panels hingedly joined to the side panels, the end panels having a free edge and a hinged edge foldably attached to the side panels, and a locking system comprising two notches of equal size formed in the free edge of each of four opposing
5 said end panels, each of the notches being spaced an equal distance from a respective closest one of the parallel fold lines forming an adjacent one of the side panels such that when the side panels are folded to form the carton and the end panels are folded over, one of the notches from each of the end panels interlocks with one of the notches from an adjacent one of the end panels to form four double-notch locking junctions, said end panels remaining substantially planar during
10 and after folding of the end panels to interlock them together.

16. (original) The blank of claim 15, wherein the notches are substantially rectangular in shape and have tapered sides, such that a mouth of the notches in the free edge is wider than a base of the notches.

17. (original) The blank of claim 16, wherein the number of side panels in the carton is selected from the group consisting of four, eight or sixteen side panels.

18. (previously amended) The blank of claim 17, further comprising a diagonal score line extending from an interior corner of each of the notches in one set of opposing said end

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panels to an outer corner formed by an intersection of one of the parallel fold lines closest to a respective one of said notches and the hinged edge to facilitate interlocking of the notches.

19. (original) The blank of claim 18, wherein the carton comprises a central open area having corners formed by the four double-notch locking junctions.

20. (currently amended) The blank of claim 19, wherein each of the notches has an outer width of 1.5 to 3 inches.

21. (previously submitted) A carton comprising a plurality of side panels hingedly joined together by parallel fold lines, the side panels having respective end panels hingedly joined thereto by a second fold line substantially perpendicular to the parallel fold lines, and a locking mechanism comprising two notches formed in a free edge of each panel of two opposed pairs of the end panels, each of the notches being positioned in the free edge an equal distance from one of the parallel fold lines closest to a respective one of the notches, such that when the side panels are folded to form the carton and the end panels are folded over, one of the notches from each of the end panels interlocks with one of the notches from an adjacent one of the end panels to form double-notch locking junctions, wherein the notches are formed only in four of the end panels and each of the notches are the same size, are substantially rectangular in shape and have tapered sides, such that a mouth of the notches in the free edge is wider than a base of the notches, and each of the end panels having the notches opposes another of the end panels having the notches, the number of side panels in the carton is selected from the group consisting of four, eight or sixteen side panels, and further wherein a diagonal score line extends from an interior

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15 corner of each of the notches in one set of opposing said end panels to an outer corner formed by an intersection of one of the parallel fold lines closest to a respective one of said notches and the second fold line, to facilitate interlocking of the notches.

22. (previously submitted) An end closure system for a carton having side panels hingedly joined together by parallel fold lines, and end panels hingedly joined to the side panels, the end panels each being substantially planar and having a free edge and a hinged edge foldably attached to the side panels, the system comprising two notches of
5 equal size formed in the free edge of each of four opposing said end panels, each of the notches being spaced an equal distance from a respective closest one of the parallel fold lines forming an adjacent one of the side panels such that when the side panels are folded to form the carton and the end panels are folded over, one of the notches from each of the end panels interlocks with one of the notches from an adjacent one of the end panels to
10 form four double-notch locking junctions, wherein the notches are substantially rectangular in shape and have tapered sides, such that a mouth of the notches in the free edge is wider than a base of the notches, the number of side panels in the carton is selected from the group consisting of four, eight or sixteen side panels, and a diagonal score line extends from an interior corner of each of the notches in one set of opposing said end panels to an outer corner formed by an
15 intersection of one of the parallel fold lines closest to a respective one of said notches and the hinged edge to facilitate interlocking of the notches.

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23. (previously submitted) A blank foldable into a carton having side panels hingedly joined together by parallel fold lines, and end panels hingedly joined to the side panels, the end panels having a free edge and a hinged edge foldably attached to the side panels, and a locking system comprising two notches of equal size formed in the free edge of each of four
5 opposing said end panels, each of the notches being spaced an equal distance from a respective closest one of the parallel fold lines forming an adjacent one of the side panels such that when the side panels are folded to form the carton and the end panels are folded over, one of the notches from each of the end panels interlocks with one of the notches from an adjacent one of the end panels to form four double-notch locking junctions, the notches are substantially rectangular in
10 shape and have tapered sides, such that a mouth of the notches in the free edge is wider than a base of the notches, the number of side panels in the carton is selected from the group consisting of four, eight or sixteen side panels, and a diagonal score line extends from an interior corner of each of the notches in one set of opposing said end panels to an outer corner formed by an intersection of one of the parallel fold lines closest to a respective one of said notches and the
15 hinged edge to facilitate interlocking of the notches.

24. (new) A blank foldable into a carton having side panels hingedly joined together by parallel fold lines, and end panels hingedly joined to at least some of the side panels along a hinged edge, said end panels having a free edge opposite the hinged edge, and a locking system comprising two notches formed in the free edge of those said end panels that overlap in a carton
5 erected from said blank, each of the notches being located such that when the side panels are folded to form the carton and the end panels are folded over, one of the notches from each of the end panels interlocks with one of the notches from another one of the end panels to form

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double-notch locking junctions, and a diagonal score line extends from each of the notches in one of said overlapping end panels to an outer corner formed by an intersection of one of the parallel fold lines closest to a respective one of said notches and the hinged edge to facilitate interlocking of the notches.

25. (new) A blank foldable into a carton having side panels hingedly joined together by parallel fold lines, and end panels hingedly joined to at least some of the side panels along a hinged edge, said end panels having a free edge opposite the hinged edge, and a locking system comprising two notches formed in the free edge of those said end panels that overlap in a carton erected from said blank, each of the notches being spaced from opposite side edges of said end panels and located such that when the side panels are folded to form the carton and the end panels are folded over, one of the notches from each of the end panels interlocks with one of the notches from another one of the end panels to form double-notch locking junctions, said end panels remaining substantially planar during and after folding of the end panels to interlock them together.

26. (new) A carton having side panels hingedly joined together by parallel fold lines, and end panels hingedly joined to at least some of the side panels along a hinged edge, said end panels having a free edge opposite the hinged edge, at least a portion of the free edge of some of said end panels overlapping with at least a portion of the free edge of other of said end panels, and a locking system comprising two notches formed in the free edge of those said end panels that overlap, each of the notches being located such that the notches in one of the end panels each interlocks with a respective one of the notches from two other of the end panels to

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10 form double-notch locking junctions, and a diagonal score line extends from each of the notches
in one of said overlapping end panels to an outer corner formed by an intersection of one of the
parallel fold lines closest to a respective one of said notches and the hinged edge to facilitate
interlocking of the notches.